PAN AMERICAN fisherman

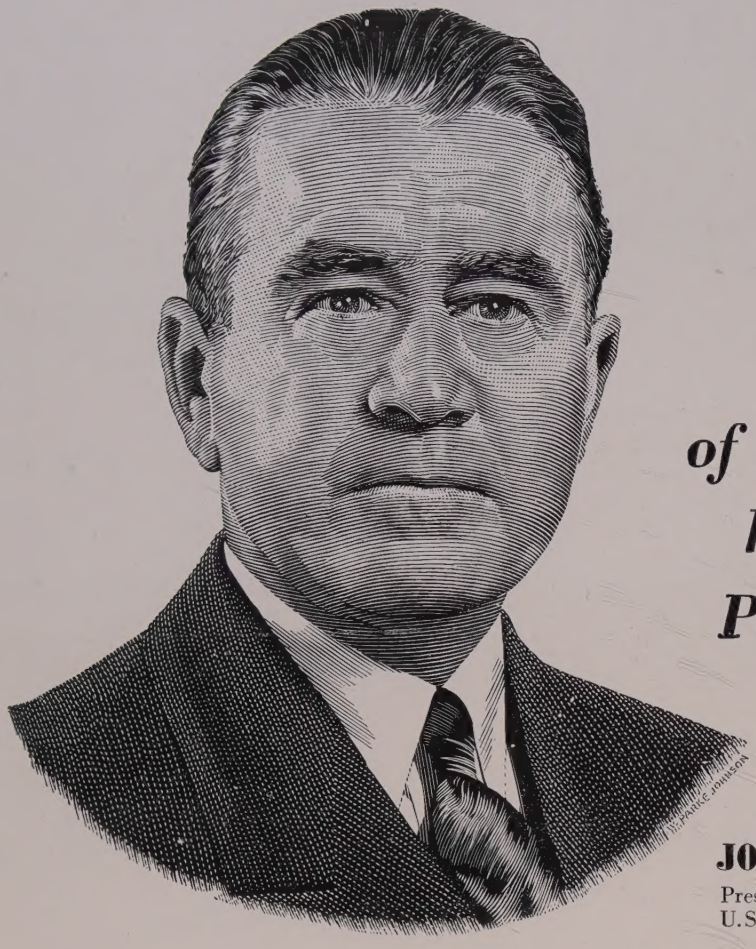
In This Issue . . .

- ★ **Transportation of Fishery Products**
- ★ **The Yellowtail**
- ★ **Inter-American Research**
- ★ **Japanese Tuna Fisheries and the U. S. Market**

APR 1954
LIBRARY
POFI
FISH & WILDLIFE

P. 10
16
23

50c A COPY ★ **MARCH 1954** ★ $3 A YEAR



"More than 98% of our 27,000 employees have enrolled in the Payroll Savings Plan"

JOHN E. GOBLE
President, National Tube Division,
U.S. Steel Corporation

"We of the National Tube Division of the United States Steel, recognize that systematic saving through the Payroll Deduction Plan is an investment in the security of the Nation, as well as of the individual. We are proud of the participation resulting from a person-to-person canvass in our plants and offices. More than 98% of our 27,000 employees have enrolled in the Payroll Savings Plan—a complete affirmation of their faith in America. Such personal savings are the backbone of our free enterprise system."

Concisely, clearly, Mr. Goble cites three of the reasons why 98% of the 27,000 employees of National Tube are enrolled in the Payroll Savings Plan:

- recognition by management that the Payroll Savings Plan contributes "to the security of the Nation as well as of the individual."
- the purchase of Defense Bonds through payroll deductions is concrete affirmation of Americans' faith in America.
- a person-to-person canvass in plants and offices put a Payroll Savings application in the hands of every National Tube employee.

There is still another reason for National Tube's outstanding employee participation: *Mr. Goble's personal interest in the Payroll Savings Plan, and the conducting of the person-to-person canvass.*

State Directors of the Treasury Department, members of the Field Staff of the Payroll Savings Division, Volunteer Chairmen of industry groups—everyone associated with the Payroll Savings Plan—will tell you that every highly successful Payroll Plan is a reflection of the deep interest and personal effort of the company's top executive.

If you are the man who makes the top decisions in your company, ask today for a report of *your* Payroll Savings Plan, particularly, the percentage of participation. Then, call a meeting of your associates. Show them this statement of Mr. Goble's. Tell them you are going "all out" to put your company (large or small) in the front rank of those who can be justly proud of their Payroll Savings Plan.

A phone call, wire or letter to Savings Bond Division, U.S. Treasury Department, Suite 700, Washington Building, Washington, D.C., will bring prompt cooperation from your State Director.

If you are not the chief executive of your company, please tear out this page and send it to the "Big Boss" with your recommendation.

Tuna on Foreign Vessels

In order to determine if there was a loophole in the regulations forbidding landings of fish by a foreign flag fishing vessel, the Fish and Wildlife Service asked the Commissioner of Customs whether a foreign vessel could land its catch of tuna taken on board on the high seas (1) at a port in the United States for transshipment in bond through the United States, or (2) at a "Free Trade Zone" in the United States. In a letter dated February 4, 1954, the Bureau of Customs replied as follows:

"Unless it is a vessel which fulfills the conditions of section 4.96 (g) of the Customs Regulations (19 CFR 4.96 (g)), relating to certain foreign vessels which arrive in the United States in distress, a foreign-flag vessel is prohibited by section 4311 of the Revised Statutes, as amended, (46 U.S.C. 251), whether documented as a cargo vessel or otherwise, from landing at port in the United States its catch or cargo of tuna taken on board on the high seas, regardless of the ultimate disposition intended to be made thereof. The prohibition applies as well to foreign-trade zones in the United States."

This inquiry was made to obtain clarification of the provisions of the law mentioned with respect to whether such landings in a port of the United States could be transshipped in bond through the United States to another country, or whether such landings could be made at a "Free Trade Zone" in the United States. In the latter case ultimate disposition might have involved reshipment back to the country of the vessel, transshipment in bond through the United States, reshipment via a United States vessel to a port of the United States, or processing sufficiently in the Free Trade Zone to permit entry into the United States.

Mackerel Landings In California

Pacific mackerel landings at California canneries, which have been declining since the peak years of the mid-thirties, reached a new low in 1953 with only 3,500 tons received from the California fishing fleet and from imports.

Figures compiled by the marine fisheries branch of the California Department of Fish and Game show that the 1953 receipts are less than 40% of the tonnage which the canneries got for processing in 1952. Tonnages averaged over 20,000 in the early years of the post-war period, and reached over 50,000 tons before the war.

Jack mackerel deliveries in 1953 were also low, with 26,400 tons registered, compared with the 73,000 tons the canneries received in 1952.

Anchovy processors received a record 41,500 tons in 1953, an increase of nearly one-third over 1952's total of 26,400 tons. Before 1952 only a few thousand tons of anchovies a year were received for processing.

DANFORTH ANCHORS...

Safest

BECAUSE THEY'RE THE

Holdingest

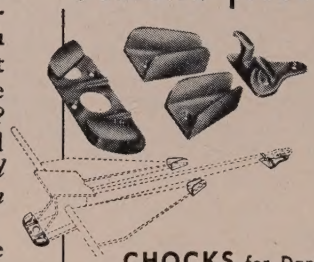
By "Holdingest," we mean that a Danforth anchor will hold far more, pound for pound, than any other anchor you can buy... it means that you have the extra margin of safety that may well save your boat when the big blows come. How do we know? All types of anchors have been tested by the U. S. and British Navies, *and the Danforth has always held better than any other.*

Send for your free copy of the 16-page booklet "Anchors and Anchoring"... it's packed with anchor test data and other interesting information!

BEST HOLDING...PLUS THESE ADDITIONAL ADVANTAGES!

- ★ Easiest to handle
- ★ Takes hold immediately
- ★ Positive resistance to rotation
- ★ Goes down under stress
- ★ Cannot foul
- ★ Breaks out easily
- ★ Comes up clean
- ★ Stows flat
- ★ Costs less for required holding power

Introducing three new Danforth products



CHOCKS for Danforth anchors to 90 lbs. Solid bronze, screwed to deck. Holds securely with one lashing, quick releasing. Two sizes about $8 and $10

BRONZE TACKLE BLOCKS 10¼" high, of high strength manganese bronze; oversize Everdur pin. 1000-pound capacity. About $15

WINCH HEADS heavily built of solid bronze. 6½" high, with bore and keyway. Exceptionally well finished. About $24

® DANFORTH ANCHORS

2159 Allston Way
BERKELEY 4, CALIF.

EDITORIAL... Advantages In Drugging Fish

THE transporting of bait fish in the tanks aboard a fishing vessel may become simplified. This is through the use of a drug which also is said to reduce the mortality rate when moving fish from water temperatures ranging from cold to warm, or warm to cold.

Water temperatures in the vicinity of 60 degrees are believed to be ideal for trout; such temperatures are therefore maintained in hatcheries. Now some airplane flights two miles in height are made with planting fish, and presumably water temperatures where the fish are eventually planted at this altitude could be considerably below the ideal temperature.

In the commercial tuna fishing business, a reverse of this temperature change is often encountered in transporting bait fish from northern into southern waters. Just what effect the use of drugs might have on salt water fish has not been fully determined, but experimentation appears satisfactory.

Name of the Drug

Sodium amytal, a hypnotic-type barbituate drug, may be used more widely on fish than on humans, if a recent discovery of the California Department of Fish and Game is put into wide-scale use.

Twenty per cent of the 18,000,000 trout planted in California waters this year will be under the harmless influence of the drug when they are planted from tank trucks or airplanes.

With a half grain of the drug to the gallon, only one-third to one-quarter the amount of water is needed in transporting fish. Fish planting costs may be cut in almost the same proportion.

Where planting crews formerly carried 200 fingerlings to the gallon of water, the new system allows the transport of an average of 500 or more. Six to ten-inch catchable-sized fish, once "canned" at eight to the gallon, may now be safely carried at 20 to the gallon or more.

The barbituate calms the fish down to a point where they use less oxygen, and therefore need less water in transit. After many months of observation in captivity, once-drugged fish show no after effects.

Not Dangerous to Use

Fish drugged and planted present no danger to the fisherman who catches, and later eats them, the Department asserts.

California becomes the first state to use drugs in fish plantings. Other States, as well as California, have used anesthetic type drugs successfully in limited live fish tagging operations.

Department Director Seth Gordon claims that the procedure is out of the experimental stage and will be widely used by the State next year.

Fishery workers have hailed the drug as an innovation as important to fish conservation as the development of the airplane planting procedure. California's senior warden-pilot, Al Reese, is credited with the major role in both programs.

A veteran of 15 years of service with the fish and game agency, Reese deplored his summer task of carrying tons of useless water over the Sierra mountains on the annual aerial fish planting mission. For the two and a half million trout planted by air in 1952, Reese and his pilots carried a total load of 25,000 gallons of water.

With the aid of a pharmacist friend, Reese experimented with the use of various types of drugs on the fish. After a dozen tries during the months of experiments, the field was narrowed down to sodium amytal and seconal sodium.

The Proper Dosage

Doses between one-quarter and 17 grains to the gallon were used in the experiments. The latter proved fatal to the fish. Fish planting crews have since decided on the half-grain-to-gallon mixture.

When the fish hit the water after their ride by tank truck or airplane, the small amount of drug in their system becomes diluted by fresh water and they immediately swim away.

In most cases, Reese states, drugged fish are in better than usual condition when they arrive at their new home—even after the two-mile-high Sierra flights. The calming effect of amytal means less thrashing about in the planting cans and is the piscatorial equivalent of a "rest cure."

The Department's marine fisheries workers are also looking over the possibilities of the drug on salt-water fish. Although no experiments have been carried out, hopes are high that it may be used in collecting live marine specimens for scientific use and aquarium display, tagging and transporting ocean fish for planting in the Salton Sea.

Proof of the effectiveness of the barbituate is a recent truck trip between the Mt. Shasta state hatchery and Lake Merced near San Francisco, which lasted 19 hours. The 100,000 eastern brook trout were transported in one trip; an operation which would have required two trips without the drug.

Some Actual Experiences.

In another instance, Reese flew 5,000 drugged smallmouth black bass fingerlings from Central Valley hatchery at Elk Grove to Blythe, on the Arizona border. Twelve pounds of drugged golden shiners, destined for planting in the Colorado River, also came through th e three-hour air trip in good shape.

As additional proof piles up that All Reese had a good hunch, in the form of favorable fish planting reports, California inland fisheries people are looking toward new fields for use of the drug. Can it be used in tagging and marking of live fish? Will it be effective in fish disease treatment or spawn-taking operations?

Can it be used by the commercial fishing fleet in the transportation of bait fish from waters where no fishing permits are required into waters where tuna may be caught? If so, it might eliminate circulating bait pumps—it might eliminate great loss of bait—it might even revolutionize bait fishing. At least, it's a new idea . . . and well worth watching.

PAN AMERICAN Fisherman

Published Monthly . . . Established 1947

Telephone 1560
Orange Savings Bank Bldg.
ORANGE, CALIFORNIA

"BUSINESS MAGAZINE OF THE WEST COAST FISHERIES"

BRIANT SANDO—Editor and Publisher

ROBERT K. LAWSON
Associate Editor

BRANCH OFFICES

WASHINGTON 6, D. C.
744 Jackson Place, N.W.
JOHN HARMS
Telephone National 8-4123

SAN DIEGO 1, CALIF.
206 Broadway Pier Bldg.
ROBERT K. LAWSON
Telephone Belmont 3-7328

STAFF PHOTOGRAPHERS
Busco-Nestor Studios

ADVERTISING REPRESENTATIVES

Richard S. Meyer
3137 Kelton Ave.
LOS ANGELES 34, CALIF.
Telephone Bradshaw 2-1456

A. S. Babcock Co.
605 Market St.
SAN FRANCISCO 5, Calif.
Telephone Yukon 2-3954

Ralph F. Duysters
141 East 44th St.
NEW YORK 17, N. Y.
Telephone Murray Hill 2-1647

George H. Boardman
25 East Washington St.
CHICAGO 2, ILL.
Telephone State 2-6296

Howard F. McClenahan
1010 Euclid Bldg.
CLEVELAND 15, OHIO
Telephone Prospect 1-6100

VOL. 8 — No. 8
MARCH
1954

TABLE OF CONTENTS

	PAGE
Editorial	4
U. S. Foreign Trade in 1953	6
Report from Washington, D. C.	7
Inter-American Tuna Commission	10
Tuna Imports	12
Transportation of Fishery Products	14
Japanese Fisheries & Markets	16
The Yellowtail	19
POFI Activities	23
The Globe	24

About This Issue . . .

There's more than the usual amount of activity in Washington these days, and so the "Report from Washington" takes on special importance. It starts on page 7.

*

Next time you hear somebody say, "What's the Inter-American Tropical Tuna Commission all about, anyway?" You won't need to shake your head and say "I dunno." That is, provided you read all about it on pages 10 and 11.

*

The second and last part of the article on Japanese Fisheries by Dr. W. M. Chapman appears on page 16.

The relative importance of free trade and tuna tariffs are covered quite thoroughly on pages 12 and 13. Congressman Utt makes some points for protection of the West Coast Fisheries that are hard to beat.

*

The way fish roam around in the ocean it must give them quite a pain to take their last ride in a truck or railroad car. But that's the way they go to market—see "Transporation of Fishery Products" on page 14. The article and illustrations by two well-known FWS experts—the former by Walter H. Stolting of Washington, D. C., and the latter by V. J. Samson of San Pedro.

Sando Publications: PAN AMERICAN FISHERMAN • FRUIT & VEGETABLE REVIEW • MOTOR WEST

Pan American Fisherman is published monthly • Business and executive offices—Orange Savings Bank Building, Orange, California, telephone Orange 1560. Postmaster: Please return all undeliverable copies, using Form 3579; return postage guaranteed. Subscription rates in the United States and possessions, one year $3.00 two years $5.00; five years $10.00. Canada $4.00 per year; all other countries $5.00 per year. Current copies 50c each; back numbers $1.00. In case of change of address, subscribers are requested to notify both the Post Office and us, and allow one month for change to take effect. Entered as second class matter March 12, 1953, at the Post Office at Orange, California, under the Act of March 3, 1879. Printed in U.S.A.

U. S. Foreign Trade In 1953

United States imports of a number of important fishery products increased sharply in 1953 compared with the previous year. Receipts of fresh and frozen tuna increased from 69 to 95 million pounds; canned tuna in brine, from about 19 to 30 million pounds; canned sardine, not in oil, from a half million pounds to over 22 million pounds; and shrimp, from 38.5 to over 43 million pounds.

Not all important items registered gains. Imports of groundfish fillets declined from 107 to 91 million pounds, while those of fish meal dropped from the record high of 203,539 to 137,430 tons.

United States exports of fishery products in 1953 likewise showed sharp changes from the previous year. Due to the decline in the pack of canned sardines, exports of this item dropped from 36.6 to 9 million pounds, while exports of fish oil increased from 42.7 to 104.9 million pounds. (See table at rightabove.)

Imports of Certain Fishery Products

Item and Country of Origin	December 1953 Pounds	December 1952 Pounds	Total Imports 1953 Pounds	Total Imports 1952 Pounds
Tuna, fresh or frozen:				
Canada	----	2,846	284,681	1,069,273
Costa Rica	----	----	594,883	603,442
Canal Zone	----	280,000	860,000	2,680,000
Ecuador	120,000	127,866	2,057,754	815,153
Peru	----	549,552	11,600,162	12,223,228
Japan	1,660,618	1,248,470	77,362,393	50,983,200
Other countries	366,449	----	2,277,651	626,640
Total	2,147,067	2,208,734	95,037,524	69,002,942
Tuna, canned in oil:				
Peru	15,650	11,130	295,875	33,205
Azores	----	----	10,650	----
Portugal	32,541	3,278	211,910	14,643
Japan	126,421	228,382	4,088,658	4,204,248
Angola	----	----	34,191	----
Other countries	1,200	5,988	41,760	36,351
Total	175,812	248,778	4,683,044	4,288,447

Fish and Shellfish Supplies

As Lent began the first week in March, consumer interest in fish and shellfish became greater. Fishery products of wide variety will be in good supply and in extra demand during this period. All the tuna canners are, as usual, putting forth extra sales and advertising efforts.

Catches of fishery products begin the seasonal increase in March that will continue over several months. A major factor in market supplies during March is the stocks of frozen fish and shellfish available from cold storage holdings. Although these holdings are much lower than last year, they are still substantially above the five-year average.

Want to talk business at sea?

You need good ship-shore communications to do business while at sea...and ship telephone service is the best way to be in touch with any telephone you want to call. If you'd like information on how ship-shore can serve you, just write to Pacific Telephone in your nearest large port city. We'll be glad to send you our free booklet.

Pacific Telephone

FOR PROMPT ATTENTION
SALES · PARTS
REPAIRS · SERVICE

CATERPILLAR
MARINE DIESEL ENGINES

WOOD FREEMAN
METAL
MARINE
PILOT

BENDIX
depth
RECORDER

Aqua-Meter

FEDERAL
PROPELLERS

Universal
100% MARINE
MOTORS

RCA
RADIOMARINE
Radiotelephone
AND
Radio Direction Finder

SHEPHERD
MARINE
2031 BELT STREET - SAN DIEGO
Phone Belmont 99471

Report from **Washington**

Gleaned from the Nation's Capital by John Harms

MILLIONS FOR FISHERIES.--Odds now seem to favor passage this year of the Saltonstall-Kennedy bill to provide $4-5 million a year for biological, technological and marketing research for the fishery industry and for other benefits.

The popularity of this proposed legislation has snowballed in the Senate. Starting out with only a few backers, the bill (S.2801) is now being sponsored by a total of 30 Senators. With about a third of the members of the Upper House sponsoring the bill, it is believed the proposal will run into little real opposition if and when it comes to a vote.

The Saltonstall-Kennedy bill is beginning to pick up backers in the Lower House too. Several companion measures have been introduced there.

--o--

HOW THE PLAN WOULD WORK.--Sen. Saltonstall says the plan is to take a large portion of the money collected from fish imports and spend it to further the domestic fishing industry which "is in an increasingly diffcult postion."

Saltonstall says: "Decreased catches, depletion of fishing grounds, and a lack of improved techniques have all harmed this basic American industry. Rising imports have subjected it to particularly severe pressure."

"Because," the Senator points out, "the difficulties of the industry so largely stem from competition by imports, the most appropriate source of additional funds for this purpose is the revenues derived from those same imports. Under existing law, however, the only portion of import revenues not turned over to the general Treasury goes to the Department of Agriculture."

The bill would direct the Secretary of Agriculture to turn over to the Secretary of the Interior ALL the money which comes from tariffs on fish. That means a minimum of $3-$4 million each year. Up to now the Agriculture Secretary has turned over only $175,000 a year which is used to develop domestic fish markets and some educational activities.

Saltonstall explains that "In carrying out these programs (fish research, etc.) the Secretary of Interior would cooperate with other agencies of the Federal, State, and local governments and with interested private organizations and individuals."

--o--

SIZE OF FISH DUTIES.--While it is generally understood that the Saltonstall-Kennedy bill would provide only about $3-$4 million to the fishing industry, the actual amount of money taken in by the U.S. Treasury from fish tariffs is much larger.

Sen. Saltonstall says that the gross receipts from duties on fishery products in 1940 amounted to $4.7 million. By 1952, gross receipts had reached a whopping $12 million. That's an increase of 250 percent. During the same period, the value of fishery imports increased from $40 million to over $200 million a year.

"The domestic industry, in the meantime," the Senator says, "by voyaging farther and farther afield at greater and greater expense for every pound of fish caught, has barely managed to hold the share of the market it had at the beginning of the period."

--o--

WHERE THE MONEY WOULD GO.--Here is where the new money would go, as seen by the fishery-minded Senators:

Biological and oceanographic research. The most urgent need is to explore the reasons for fluctuations in the supply of fish. Reports from the Pacific States, Atlantic Coast, Great Lakes and other fishing regions, confirm the importance of stability of supplies in establishing new markets for fishery products.

Technology. Development could be undertaken of chemical tests for freshness of chilled and frozen fish and shellfish so as to provide means for control of quality.

Increase markets. Much more data than is now being collected would be helpful in determining the proper use of our salt-water and fresh-water fishery resources. Surveys should be made of large consumer areas to figure out changes in marketing since the advent of frozen packaged fish and shellfish products.

Education. Development of new uses for the underdeveloped and less popular species of fish products . . . so as to provide year-round employment and stabilize market prices for the fishermen, processors, marketers, and consumers of domestically produced fishery products.

These examples are only a part of the work that could be done with the much-needed additional government help.

--o--

CONGRESSMEN ARE TALKING TUNA.--California's Congressman Utt recently took the floor and blasted "irresponsible statements" made by a prominent businessman regarding trade policies affecting tuna.

Rep. Utt put into the Congressional Record some hard facts about the tuna industry designed to jolt some congressmen out of their who-cares attitude. In his address, Utt quoted from a statement made by Mason Case, chairman of the Pacific Coast Fish Producers Institute, Terminal Island, Calif. Case made the statement before the Randall Commission, the President's study group which recommended lower tariffs. This is the statement:

"The quantity of canned tuna consumed in this country is expanding yearly. The Japanese, for example, are going all-out in building new vessels, yet at the present time there is not one tuna clipper under construction in the United States. The clipper fleet, due to numerous

(Continued on page 21)

N.F.I. Men Speak at Convention

Frederick M. Bundy and Murray Wheeler represented the fishing industry in speaking at the annual convention of the National Wholesale Frozen Food Distributors Association held recently in New York City.

Mr. Bundy, president of the National Fisheries Institute, was one of three members on the panel, "The Main Course—Frozen Foods Future Market." Mr. Wheeler, director of N.F.I. public relations, spoke for the Shrimp Association of the Americas on "How to Get Your Share of the Institutional Business."

Mr. Bundy told his audience of the the changes that have taken place in the fish picture during the last 30 years. There has been a five-fold increase in consumption of fishery products.

"The best thing about it," he added, "is that people today are eating more fish because they like it and not because they have nothing else or because of religious requirements.

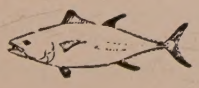
"Today there are more month-to-month changes than I have seen in 30 years. A fishing boat is now a $250,000 unit. It is a factory afloat with radar, asdic, loran, fathometer, ship-to-shore telephone and even a few of the amenities. Catching is expedited by underwater scanning and quality is protected by refrigeration. The shore plants and canneries also have not been idle in seeking more modern methods."

Red Tide Scourge Studied

A determined effort to find an effective control of the Florida red tide is receiving the attention of Secretary of the Interior Douglas McKay. On a recent trip to Florida he met with representatives of the affected areas and discussed the problem.

Since returning to Washington he has discussed the matter with Assistant Secretary Orme Lewis and with John Farley, Director of the Fish and Wildlife Service.

Mr. Lewis reported that the Service is presently conducting research at Ft. Myers, Florida, with an annual appropriation of $35,000, and further research with a scientifically equipped boat may require additional funds.



Theme Chosen for San Pedro Fiesta

The San Pedro Chamber of Commerce has chosen the theme "Circus Time" for the 1954 Fishermen's Fiesta. The celebration is planned for Oct. 16 and 17, according to general chairman Don P. Loker, of Star Kist Foods, Inc.

The winning entry, one of more than 100 themes entered in the contest by harbor area residents, was submitted by Mrs. R. E. Hollomon, who received a $50 Defense Bond.

Commercial Catch Increased in 1953

The 1953 catch of commercial fish and shellfish in the United States and Alaska totaled about 4,400,000,000 pounds, as compared with 4,300,000,000 pounds in 1952, according to a report to Secretary of the Interior Douglas McKay by John L. Farley.

The increase was due to a spectacular gain in the catch of menhaden, one of the least known but most important species of commercial fish. A substantial supply of menhaden on the Atlantic Coast and a heavy demand for menhaden meal for poultry and swine feeding were responsible for the increase.

The outstanding fishing port in 1953, in volume of landings, was Lewes, Delaware, where 360,000,000 pounds of menhaden were landed. However, San Pedro, Calif., maintained the first place position in edible fish which it has held for many years, with landings of 328,000,000 pounds, principally of tuna, Pacific and Jack mackerel, and sardines.

Other leading ports for which poundage figures are available were: Gloucester, Mass., with 186,000,000 pounds, mainly of ocean perch, whiting, haddock, and pollock; Boston, Mass., with 152,000,000 pounds principally of haddock, cod, pollock, whiting, ocean perch, and flounders; Reedville, Va., with 152,000,000 pounds of menhaden; and San Diego, Calif., with 128,000,000 pounds, chiefly of tuna.

The outstanding ports with respect to value of the catch were San Pedro, with landings worth $32,800,000, and San Diego, with a catch valued at $20,250,000. The catch value at these two ports far outweighed other domestic ports.

Pacific Whales Increase

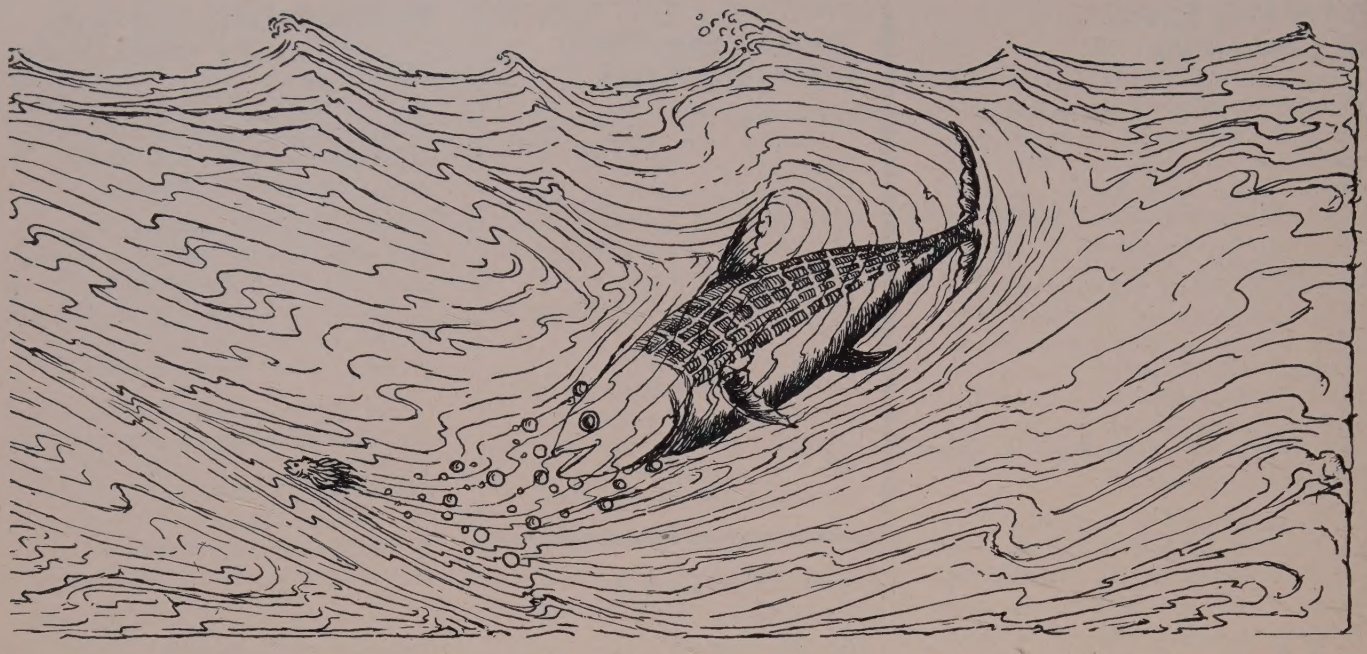
Secretary of the Interior Douglas McKay reports that a Pacific gray whale census conducted at Point Loma, Calif., indicates this year's count will exceed 1,000 whales, as compared with 850 last year.

The census was conducted by the Fish and Wildlife Service in cooperation with the National Park Service as these giant sea mammals pass southward along the California coast in their annual winter migration.

The whales move each winter from the far north to the lagoons of lower California to breed. In the course of the migration they sweep close to the Cabrillo National Monument at Point Loma and the monument serves as a vantage point for the census.

Interest in the gray whale stems from its past economic prominence and the decimation it suffered at the hands of the whaling industry in the late 1800's and again in the 1920's. The herd's ranks are swelling and the species is expected to regain economic importance with the help of protective regulations.

Because whales inhabit the open sea and often visit waters adjacent to more than one country, their capture is regulated by international agreements. The gray whale of the Pacific annually finds its way to waters off Mexico, Canada, and the Union of Soviet Socialist Republics as well as the United States.



Research Efforts of the
Inter-American Tropical Tuna Commission
. . . and Its Primary Purpose

WHAT is the purpose of the Inter-American Tropical Tuna Commission? As set forth in the Convention, it is to gather and interpret information to help maintain, at levels which will permit maximum sustained catches, the populations of yellowfin and skipjack and other fish taken by tuna vessel in the Eastern Pacific Ocean.

This requires, for a series of years, measurements of yield, intensity of fishing, and abundance of the fish populations. Such measurements can be made at reasonable cost only from the records of the commercial fishery, hence the research staff must continuously gather detailed information on the locations of fishing, quantity of fish caught, and effort required to make the catches.

Such statistical records alone are important, but in addition they need skilled interpretation, based on knowledge of the life histories and behavior of the fishes, which we refer to as their "biology."

We need to know the natural population units into which each species is divided; the amount and rate of migration of individuals within and between these population units. We need to know at what stages of their lives the individuals are vulnerable to the fishery, in what geographical areas and over what period of time. We need to understand the manner and degree in which fish populations are renewed by birth, growth, and death—the "vital statistics" of the species.

This article was abstracted from the Inter-American Tropical Tuna Commission Annual Report for the year 1952. The report was prepared by Milner B. Shaefer, Director of Investigations, for the Commission.

Variations in the abundance of the fish populations with which we are concerned are affected by the predations of man and the fishery, and other enemies, variations in supplies of food and in the physical environment influencing rates of birth and death.

Tunas exist in a complex oceanic environment, which is not uniform in either space or time. The littoral habitat of the bait species subjects them to even greater variations.

Adequate understanding of these ecological factors which influence the populations of tunas and bait fishes will help us to avoid confusing their effects with those produced by fishing.

Information respecting amounts and species of tunas caught in the tropical Eastern Pacific Ocean is gathered from a variety of sources: records of government agencies of countries utilizing substantial quantities of tuna, records of tuna canners, and import declarations in the United States.

Statistics of Total Catch

Compilation of data for 1951 indicates landings of 308.6 millions of pounds, consisting of 183.7 million pounds of yellowfin tuna, 121.2 million pounds of skipjack, and 3.7 million pounds not identified by species. This represents a decrease of 45 million pounds from 1950 due, primarily, to considerable curtailment of the activity of the United States fleet as a result of economic circumstances.

The fleet based on the West Coast of the United States landed, in 1951, 277.4 million pounds, consisting of 161.6 million pounds of yellowfin tuna and 115.8 million pounds of skipjack. Of these quantities, vessels using live bait landed 91% of the yellowfin tuna and 88% of the skipjack, purse seiners having had relatively poor fishing during 1951.

Data on tuna landings for 1952 are still in process of compilation. It appears, however, from prelimi-

nary figures, that the total catch of yellowfin tuna from the tropical Eastern Pacific was at about the same level as in 1951, or slightly higher, but that the total catch of skipjack was lower.

The tuna clippers, using live bait, are at present the dominant element of the fleet. Their method of fishing requires large quantities of small inshore fishes for "chumming" the tuna to the fishing vessel.

Estimates based on our 1951 logbook show that the fleet of tuna clippers operating from United States West Coast ports captured the following quantities of bait fishes during that year:

Kind of bait	No. of Scoops	% of Total
Anchoveta	1,603,000	63.0
California sardine	382,000	15.0
Galapagos sardine	83,000	3.3
Northern anchovy	160,000	6.3
California sardine and Northern anchovy mixed	12,000	0.5
"Herring"	146,000	5.7
Salima	61,000	2.4
Other species, and not specified	97,000	3.8
Total	2,544,000	

Tabulation of data for 1952 was still in process as this was written.

Effort Required for Catches

In order to measure changes in the quantity of fish available (their abundance) we need information not only on the amount of the catches, but also on the amount of fishing effort required.

As a basis for data on such effort, a system of statistical areas was established. The Eastern Pacific is divided into major divisions, or areas, by the lines of latitude and longitude divisible by five. Each of these areas is further divided into 25 sub-areas which are one degree on a side; these are numbered serially from 1 to 25 within the major area.

Data respecting fishing effort and resulting catches obtained from logbooks of the tuna clippers during 1951 have been tabulated and summarized according to statistical areas and sub-areas, quarter of the year, and size category of vessel. These provide estimates of yield and yield-per-unit-fishing-effort by season of the year for both large and small areas.

The tuna clippers spend only a part of their time fishing for tuna. Much time is spent in pursuit of the small, inshore fishes used for live-bait in the capture of the tunas. For statistical data respecting the kind and quantity of bait fishes taken, as well as information as to changes in catch-per-unit-of-fishing-effort, our only source is the information recorded by the fishing vessel masters in their logbooks.

Other information useful for measuring in a general way changes in the condition of the fishery is obtained by maintaining for the whole fleet records of departure and return dates for each trip, together with the quantities of tunas landed. These statistics shows the over-all fishing results—and reflect changes in the abundance of fish and the degree to which they are available to the fleet.

Biology and Ecology of Bait Fishes

Since over 80% of the yellowfin and skipjack taken from the tropical Eastern Pacific are captured by means of live-bait, the supply of bait is one of the important factors in maintaining the catch of tunas at sustained high levels. For this reason, the study of the bait resources is one of the important aspects of the Commission's research program; it includes knowledge of the life histories, biology, and ecology, of the species concerned.

Inasmuch as the anchoveta is by far the most important bait species, accounting for 63% of the live-bait logged by the clipper fleet in 1951, primary attention has been given to advancing our knowledge of this species. It appears that most anchovetas taken by the tuna fleet are only one or two years old. Examination of the state of maturity of eggs in the ovaries of specimens collected by the fleet indicates that the fish first spawn at two years of age. Spawning takes place, apparently, in the late fall and winter months.

Likewise, sardines used in the Galapagos Islands are mostly small fish, less than one year old. However, we have obtained some fish in our samples of large sizes, and fishermen report seeing quite large fish from time to time. It appears, therefore, that the Galapagos sardines may be a self-sustaining population.

Oceanography of Eastern Pacific

The tunas, being high-seas, pelagic fishes, are related in their abundance, aggregation, and behavior, not to the features of the land, but rather to the properties of the water masses in which they live. Although they are often found in relation to banks and other features of the sea bottom, these relationships are secondary. The success of tuna fisheries is aided by an understanding of the sea in which they live, and how they are related to it.

The tropical Eastern Pacific Ocean is one of the less well known regions of the Pacific Ocean. Study of the current systems and water masses of this region, their effects on production of living organisms, and finally the relationships thereof to the tunas, is difficult and costly but an important line of research which must be undertaken by the Commission.

Analysis of the data we have obtained on the various currents and water masses, temperature distributions, and the larger changes from place to place in biological phenomena, is going forward at Scripps Institution.

Biology and Ecology of Tunas

Our collection of information on distribution of tunas shows there are certain areas where the fish appear in much greater concentrations than elsewhere. One of the important problems requiring investigation is the vertical distribution of adult tunas. The present fishery in the Eastern Pacific operates only on fish at or near the surface.

In the Western and Central Pacific there is a sizable fishery on large, old tunas which inhabit the sub-surface layers to depths of at least 50 fathoms. Now we'd like to know if, further to the east in the vicinity of our fishery, these large tunas also exist in sub-surface waters where they are not available to presently employed fishing methods. *

Method of Telling Freshness of Fish

Experiments on judging the freshness of fish by the glaze on its eyes are being carried out at the Torry research station, Aberdeen, Scotland. The eyes of the fish are compared with a series of glass eyes, and it is claimed that this method is an accurate guide in determining how long a fish has been out of the water.

The glass eyes are filled with liquids of different cloudiness, each corresponding to the eye-glaze of fish for which accurate records have been kept on the length of time out of the water. The one which matches the eye of the fish being examined reveals how long that fish has been out of the water.

These experiments are being made to enable scientists to compare the efficiency of different methods of storing fish, and to check on the age of fish landed by fishing vessels.

Views of a U. S. Congressman On

TUNA IMPORTS

. . . and Our Domestic Markets

By JAMES B. UTT

Member of Congress
California's 28th District

I have read with interest and considerable surprise the article in "Look" Magazine, by Paul G. Hoffman, Chairman of the Board of Studebaker Corp., former head of ECA and chief exponent of Free Trade. Most of his statements are . . . not supported by fact. He said that in a talk with a Japanese businessman, he was told that Japan would buy thousands of American automobiles if they could get dollars. I quote from the article:

"He (a Japanese businessman) was too polite to suggest that Japan's efforts to earn dollars by selling goods to us had met with one rebuff after another. When the Japanese tried to sell us tuna fish and other products, they bumped into insurmountable barriers set up by American businessmen."

Tuna Fish Imports

The Tuna Fish Industry on the West Coast normally employs around 30,000 fishermen and workers, and in 1952 the domestic production was a $150,000,000 industry. Although total consumption has increased, this amount is a much smaller market than in previous years because of the usurpation by imports, principally from Japan and to some extent from South America.

In 1948, a little over 9 million pounds of frozen tuna were imported as compared to more than 82 million pounds in the first ten months of 1953. In 1948, one thousand cases of tuna in brine were imported as compared to over a million cases in the first ten months of 1953. In 1948, 59.6% of all the tuna sold in the United States was caught by domestic bait boat clippers, whereas in 1953 only 38.3%, an all time low, was by domestic boats.

Tariff

Frozen tuna is imported duty free. Although Iceland neither catches nor exports tuna, a reciprocal trade agreement signed with her in 1943 resulted in the imposition of a 12½% tariff on the value of tuna and bonito canned in brine. This is entirely inadequate to protect the domestic producer in view of the drastically lower wages and other production costs abroad.

Cancellation of the Mexican Reciprocal Trade Agreement, which allowed a 22½% tariff, raised this to 45% and this type of import is now held at a reasonable level. However, this caused the Japanese exports to shift largely to the tuna in brine and it is wrecking the domestic industry.

American cannery workers earn a minimum of $1.85 per *hour* as compared to the Japanese cannery workers who make fifty cents per *day*. Japanese fishermen make about $29 per month which is less than 10% of the earnings of American fishermen.

Exports

One of the arguments for free trade is that it would encourage other nations to buy our products, thus substituting an export market for the loss which would occur in our domestic market. A recent survey by the Tuna Research Foundation of Long Beach, California, discloses that al-

most without exception other nations require export licenses and then refuse to grant them for tuna from the United States. The Japanese tariff on canned tuna was 20% and they also required licenses which they would not grant. Even without these restrictions, exports would be impossible due to our higher cost of production mainly through higher wages to American fishermen and canners.

Since the quantity of canned tuna consumed in this country is expanding yearly, tuna shipbuilding construction should be increasing also in the United States. While the Japanese, for example, are going all out in building new vessels, at the present time there is not one single tuna clipper under construction in the United States. The reason as stated by Mason Case, Chairman, Pacific Coast Fish Producers Institute, Terminal Island, California, to the Randall Comimssion is: "No one in his right mind will risk any capital in an industry faced with ruin due to unrestricted or low tariff imports."

The tuna industry and its workers are not seeking the elimination of Japanese and South American fish for the domestic market, but they do, however, insist that such competition should be on an equal basis with due consideration to wages and cost differentials.

Mr. Hoffman closed his article by saying that since we do not have tariff barriers between our several states, why should we have any between or among countries? He might just as well say that because there are no immigration barriers between or among the states, why should we have immigration restrictions as to any nation?

His argument falls by its own inconsistency because he does not take into consideration the fact that each state has safety, health and labor standards, compensation insurance, unemployment insurance, and other statutory benefits, to say nothing of minimum wage laws from 10 to 20 times higher than wages paid behind the low wage curtains.

One certain way to bring on a depression in this country is to import it by way of unrestricted imports of cheap wage products or unrestricted importation of cheap labor itself. You could not get ten votes in Congress to permit unrestricted immigration into this country of one-dollar-a-day labor, and yet the two go hand in hand. *

Now Here Is THE OTHER SIDE *Of the Argument*

Probably the discussion of "high tariff-low tariff" has taken up more time in the halls of the United States Congress than any one other subject. It has been one of the basic points of division in the two major political parties and has been kicked around for generation after generation.

According to an editorial in the Santa Ana (Calif.) Register, "Congressman Utt usually stands on sound ground but has "stubbed his toe" on the problem of free trade.

The Register says the writings of Frederic Bastiat, French Economist, apply to this situation better than Utt's. Bastiat said:

"When goods cannot cross borders, soldiers will."

As the Register editorial further states, "American cannery workers earn a minimum of $1.85 per hour as compared to the Japanese cannery workers who make 50 cents a day.

"All of which is certainly true, but the more it is true, the more reason there is to provide no barrier for the product of these workers; for, in providing us with their tuna on the basis of 50 cents a day, they will not charge us for it at the rate of $1.85 an hour.

Now listen to Bastiat more than 100 years ago, "France has two means of procuring a given quantity of cloth. The first is to make it; the second is to make something else, and to exchange this something else with the foreigner for cloth.

"The law, which prohibits the importation of foreign cloth, decides, then, that if France wishes to have cloth, she must make it, and she is prohibited from making the something else with which she could purchase foreign cloth.

"Thus the law virtually decrees that for a determinate amount of labor, France shall have one yard of cloth, when for the same amount of labor she might have two yards, by applying that labor to something else. France could make this something else to exchange for cloth, with a less expenditure of labor than if she had made the cloth itself."

Such logic may or may not apply to the tuna industry.

Marine Patrol Fleet

The California Department of Fish and Game has increased its vigilance on all phases of commercial and sport fishing along the southern California coast with the addition of the speedy 35-foot "Yellowtail" to the marine patrol fleet.

T. W. Schilling, supervisor of marine patrol, has assigned Wardens William McGuire and George Mclean to operate the new boat, which will be on station at Port Hueneme. It will work the coastal waters from Pt. Conception and the northern Channel Islands south to Santa Monica Bay. There has been no Department of Fish and Game patrol boat stationed at Hueneme since 1938.

The new "Yellowtail," a cabin cruiser of plywood hull construction, was built by the Jeffries Boat Co. of Venice, Calif., and was delivered to the Department on February 3. Final tests and outfitting were completed at Terminal Island.

Two Cadillac engines developing a total of 420 horsepower give the craft a top speed, fully loaded, of approximately 30 knots. Cruising speed is 20 knots. With 270 gallons of gasoline in her tanks, the "Yellowtail" has a cruising range of some 400 miles. She carries 30 gallons of fresh water and sleeps three.

The speedy craft is equipped for receiving and transmitting on both ship-to-shore and FM radio and is outfitted with a depth recorder. A powered winch will assist the warden crew in picking up illegal nets and traps.

The Department now maintains a total of five ocean patrol boats in Region V. In addition to the "Yellowtail" are the 25-foot Grunion, stationed at San Diego; the 26-foot Pompano, stationed at Terminal Island; plus the Marlin and the Bluefin, both 63-footers, stationed at San Pedro.

Trucks and rails both play an important part, as shown in this typical scene at a California tuna cannery.

Transportation OF FISHERY PRODUCTS

By WALTER H. STOLTING

NEXT to the functions and costs of production, processing, wholesaling and retailing, those of transportation are the most important in handling fishery products. This brief review of the fishery transportation field is designed to reveal a few of the more interesting facts about this activity.

First of all, a quick look shows that the entire transportation industry in the United States today is big and important business. For the year 1952 gross revenues of Class I U. S. railroads was $10,580,762,001, gross revenue of Class I U. S. inter-city motor carriers was $3,016,398,797, and total operating revenue of domestic airlines was $827,110,660. Add to this, the revenue of other motor carriers, bus operators and other forms of transportation—and realize the tremendous extent of this item in today's economy.

It has been estimated that in recent years, the fishing industry's total transportation bill averaged approximately $75 million annually on a line haul basis. If reshipments from redistribution centers are considered, the total bill approaches $100 million annually. This does not include local cartage and private delivery engaged in by service wholesalers, service retailers, etc. When one relates the amount of this bill to the total retail expenditure for fishery products of about $1 billion it is realized that an industry-wide cost which amounts to 7½ to 10% of the end value of its product is a cost which is well worth keeping an eye upon.

No one in the fishing industry whether he be a boat owner, fisherman, member of a crew, processor or dealer, can look askance at this cost. Besides the processor or dealer who directly pays the transportation bill, the producer is also vitally affected. When increased transportation costs are not absorbed by processor, distributor or consumer, they are taken out of producer returns from the sale of his product. When absorbed by someone other than the producer, the result may limit the marketing of the product.

The importance of these factors is exemplified in the field of agriculture where the Congress has provided that the U. S. Department of Agriculture assist in improving transportation services and in obtaining reasonable rates for agricultural products and farm supplies. Activity of this type was first authorized in 1938 and broadened in the Agricultural Marketing Act of 1946. The ultimate objective is to create improved marketing conditions for farmers.

The fishery industry may also request the U. S. Department of Agriculture and the U. S. Department of Interior to act in a similar capacity for it. In recent years both these Departments have been particularly active in the field of transportation of fishery products. Funds for this work have been made available in recent years by Congress in the Appropriation Acts of these Departments.

Representatives of both Departments have appeared as witnesses in many transportation regulatory body proceedings affecting the fishery industry. In the past the work of the U. S. Department of Agriculture has been concerned predominately with technical studies of transportation rates, and with the furnishing of legal counsel. The work of the U. S. Department of the Interior has been concerned predominately with studies of the economic effects of various transportation charges on fish production and distribution. Both Departments act cooperatively in fishery transportation matters.

The volume of fishery products transported, although only a small part of the total volume of all commodities transported annually, is nevertheless considerable. Data showing the estimated poundage of fishery products transported by the three principal carriers for the years 1935-1952 are shown in Table 1.

Railroads carry the greatest part of this volume. Such products as canned fish, fish meal, fish solubles, and fish oil make up the bulk of fishery products hauled by railroads; however some fresh and frozen fish,

Mr. Stolting is Assistant Chief, Economics and Cooperative Marketing Section, Branch of Commercial Fisheries, Fish and Wildlife Service, Washington, D. C.

particularly in the case of transcontinental shipments, are transported by railroad. Truck operators haul the bulk of fresh and frozen fish shipped and also carry a smaller amount of canned fish, fish meal and fish oil. The Railway Express Agency carries fresh fish and shellfish predominately.

To date, air cargo and air express transportation have been used very slightly by the fishing industry. The volume of boat or vessel transportation of fishery products, important in moving such products from Alaska to the States and in some intercoastal movement of canned fish originating on the West Coast, does not come near the volume handled by the railroads (both freight and express) or trucking firms.

In recent years the marketing of all fishery products has been affected

(Continued on page 18)

TABLE 1—Fishery products transported by three principal types of transportation, 1935-52

(Estimated in millions of pounds)

Year	By rail freight	By rail express	By motor carrier	Total
1935	2,471	245	989	3,705
1936	2,937	264	1,175	4,376
1937	2,849	405	1,139	4,393
1938	2,562	292	1,025	3,879
1939	2,775	206	1,110	4,091
1940	2,363	216	945	3,524
1941	2,802	230	1,121	4,153
1942	2,682	199	1,073	3,954
1943	2,982	314	1,193	4,489
1944	3,102	283	1,241	4,626
1945	3,073	326	1,229	4,628
1946	3,120	333	1,248	4,701
1947	3,054	342	1,223	4,619
1948	2,911	345	1,467	4,723
1949	3,056	340	1,540	4,936
1950	3,127	330	1,582	5,039
1951	2,814	300	1,612	4,726
1952	2,681	310	1,615	4,606

Source: Fish and Wildlife Service.

TABLE 2—Rail freight: Indexes of rates on various categories of fishery products by months, April 1939-December 1952

ALL FISHERY PRODUCTS

Year	Average	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1939					80.4								
1940	80.4	80.4											
1941	80.4	80.4											
1942	83.8	80.4			84.9								
1943	82.2	84.9					80.3						
1944	80.3	80.3											
1945	80.3	80.3											
1946	83.5	80.3						86.5				87.0	
1947	100.0	100.0											
1948	123.0	118.4				125.2				125.3			
1949	134.4	132.3		132.2		133.5				137.3			
1950	136.3	137.3			136.2				135.7				
1951	140.2	135.7			139.4					144.8			
1952	152.3	144.8				154.2	156.4						

CANNED FISH PRODUCTS

Year	Average	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1939					82.7								
1940	82.7	82.7											
1941	82.7	82.7											
1942	86.4	82.7			87.6								
1943	84.7	87.6					82.7						
1944	82.7	82.7											
1945	82.7	82.7											
1946	85.6	82.7						88.5					
1947	100.0	100.0											
1948	126.1	122.2					128.0						
1949	136.3	134.7								139.5			
1950	135.3	139.5			135.2				132.9				
1951	136.4	132.9			135.6					139.9			
1952	144.1	139.9				146.9	146.1						

FISH, FRESH OR FROZEN

Year	Average	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1939					79.8								
1940	79.8	79.8											
1941	79.8	79.8											
1942	83.0	79.8			84.0								
1943	81.4	84.0					79.6						
1944	79.6	79.6											
1945	79.6	79.6											
1946	83.2	79.6						86.7					
1947	100.0	100.0											
1948	122.0	117.0				124.3				124.7			
1949	131.8	131.5		132.1						131.5			
1950	131.5	131.5											
1951	136.4	131.5			135.7					141.0			
1952	146.9	141.0				149.9							

Source: Indexes of Transportation Rates for Fishery Products by Morton J. Garfield, Fishery Circular 23, Fish and Wildlife Service.

JAPANESE *Tuna Fisheries* AND THE *United States* TUNA MARKET

PART 2

By W. M. CHAPMAAN
Director of Research
American Tunaboat Association

Skipjack Fisheries

The skipjack fishery is the largest Japanese tuna fishery, taking 110,000 tons in 1952 which the Japanese say was an average year. The fishery is operated seasonably close to the Japanese home islands (much of it within sight of land) almost exclusively by live-bait boats. The fishery gets under way in April and terminates in late October. July, August and September are heavy landing months. Skipjack is a staple protein food in Japan, most of it being used in the dried smoked form, but the best of it is used fresh or half-dried.

Up to now little skipjack has been imported to the United States in the frozen form (about 1,200 tons each in 1952 and 1953). In the first place skipjack does not get cheap in Japan until July. By this time the American fishery is normally producing heavily. Secondly, the demand for skipjack in Japan is sufficiently heavy to keep the price fairly high. The first situation applied in 1952. The average ex-vessel price of skipjack in Tokyo reached a low of $155 per ton which resulted in some skipjack offerings laid down on the West Coast at $240 per ton, in contrast to our price then of $260 per ton. The second situation applied last year when the average ex-vessel price of skipjack did not fall below $220 per ton in Tokyo, and for the most part held at $240 and $260. Thus there were only short periods with small lots available, when skipjack could be laid down in California for less than $350 per ton.

The situation with respect to canned skipjack is different. About 600,000 cases of light meat tuna in brine were canned in Japan last summer from skipjack. Of this amount nearly 400,000 cases were still being held in inventory in Japan at year's end with movement and market for the product sluggish in the United States.

Three reasons are put forth for this: (1) The pack was put up at such a high raw material cost that cutting the price sufficiently to move the product on this market would be prohibitively expensive; (2) The Japanese have spent all their merchandising effort on building a white meat market, and have not yet built a light meat market in this country sufficiently large to absorb 600,000 cases of the product; and (3) The Japanese are anticipating a substantial increase in the price and shortage in supply of light meat tuna in oil in this market during the winter and spring, which will permit them to move their pack at a profit and so they are holding on.

Long-Line Fishery for Tropical Tuna

The long-line fishery for tropical tuna operates all over the Western half of the tropical and sub-tropical Pacific and in the Eastern Indian Ocean between Indonesia and Australia. It produces bluefin, yellowfin, and big-eye tuna as well as black marlin and shark. In 1952 this fishery produced about 63,000 tons of tuna of which 19,000 tons were yellowfin and most of the remainder was big-eye.

All of the vessels engaging in this fishery are ice boats. The fish is landed chilled for the reason that the market will not accept frozen fish at a good price. This fish is caught for the *sashimi* market—raw fish dipped in *shoyu* sauce. Frozen fish does not make good *sashimi*. Also there is a premium for freshness, and for redness of flesh which is associated with larger size. All of the landings are sold at auction.

The prices paid for top quality fish in this *sashimi* market are phenomenal by American standards. Bluefin bring by far the highest price and big-eye generally bring $20 to $40 per ton more than yellowfin of similar qualities. The high price brought by bluefin during November of last year was $3,220 per ton; for big-eye $1,540 per ton, and for yellowfin $1,620 per ton. Average prices are, of course, substantially lower and more difficult to ascertain but at the present time are about $2,000 per ton for bluefin, $340 per ton for big-eye, and for yellowfin $300 to $320 per ton. The Japanese domestic market is firm to strong at these prices.

This is the section of the Japanese tuna industry in which the widest profit margin is being shown, which is expanding rapidly geographically and production-wise, and for which all the new vessel construction in the larger sizes is destined. This is almost purely a Japanese fishery for a Japanese market and there is little or nothing the American tuna industry can do to affect the prices received by the fishery, its profit margin, or its rate of expansion.

Calculations based on prewar consumption of this form of tuna and present population level in Japan indicate that there is room for substantial increase in volume of consumption by this market at present prices. Unlike the other Japanese tuna fisheries there does not appear to be strong annual or seasonal fluctuation in the catch per unit of effort in this fishery. So many hundred hooks fished per day, per week, or per month will produce so many tons of tuna in a given length of time within reasonable limits.

Conclusions

From the above considerations certain conclusions can be reached as to the relations between these Japanese tuna fisheries and our bait boat fishery.

White Meat Market

Albacore is fished in Japan almost exclusively for the American white meat canned tuna market. Accordingly, the price paid for albacore in Japan is established by conditions arising in the American market and American firms can control the price of albacore landed in Japan insofar as they can control these conditions in the American market.

Subject to the possible development of new albacore grounds in the eastern Indian Ocean or Chile or New Zealand, the Japanese fishery for albacore has expanded close enough to its geographical and production boundaries that no major steady increase over present volume of production can be reasonably anticipated. Accordingly, it can be expected that 50,000 to 60,000 tons of albacore will arrive in the United States from Japan each year either in the canned or frozen form unless some artificial trade barrier is imposed on the flow of imports.

Full production and an untrammeled flow of albacore to the United States during 1953 did not disturb the United States white meat tuna market adversely, but American production of albacore was light and so was that of yellowfin.

The United States white meat tuna market is dependent upon Japanese albacore production for substantially more than half of its volume.

Light Meat Market

Except for mothership production of yellowfin and big-eye, these forms of tuna plus bluefin and skipjack are fished almost exclusively for the Japanese market. Accordingly, the prices paid for these forms of tuna in Japan are not controlled by conditions in the American market and are therefore substantially or totally beyond control by American firms.

Mothership production is solely dependent upon American market conditions but at the present level of production is not a substantial factor in the American market and this does not appear likely to change.

There is no expectation that any substantial quantity of bluefin will ever be exported from Japan.

Yellowfin and big-eye production from long-line vessels in Japan, while expanding rapidly, seems to have adequate market in Japan to keep it largely off our markets.

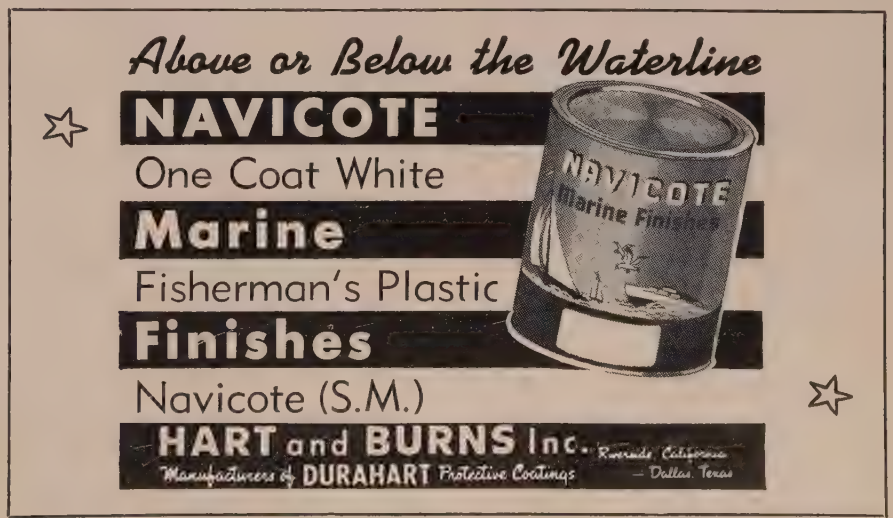
Skipjack is the largest volume tuna producer in Japan: It is priced normally at a level which permits some diversion to the American market. Larger than average catches in Japan will drive the price down so a large volume can be diverted this way in both the canned and frozen forms. Normal catches leave the price where no volume can be exported in the frozen form but near the level where substantial volumes of canned light meat tuna in brine can be shipped to this country. Short catches keep the price in Japan high enough to prevent export of substantial volumes to this country in either the canned or frozen form. The catch of skipjack in Japan varies widely from year to year. In 1953, the catch was below normal.

At the present moment Japanese production has little direct effect, and no control, on the American light meat tuna market. This situation can change quickly. Some factors which could change it are: (a) bumper albacore crops in both countries, which throws American production of albacore into the light meat pack; (b) bumper skipjack crop in Japan which would divert a large volume to this market; (c) average production of yellowfin and skipjack in the United States which would find American cannery capital and a large share of the total American canned tuna market already committed to Japanese white meat tuna production. *

Dole's 35th Year with G.P.

Charles E. Dole of Piedmont, Calif., celebrated his 35th year with the General Petroleum Corporation on Valentine's Day, Sunday, February 14.

Dole, San Francisco representative for the Marine Transportation Department, is also in charge of export for the company's Northern California Division. He began his career as a trainee in Brooklyn in 1919.



Loading cases of canned tuna at Terminal Island, Calif.

TABLE 3—All carriers: Indexes of rates on fishery products, by years, 1947-52

Year	Rail freight	Rail express	Motor carriers	Average all traffic*
1947	100.0	100.0	100.0	100.0
1948	123.0	110.2	109.5	117.7
1949	134.4	120.0	116.8	127.7
1950	136.3	129.2	121.0	131.0
1951	140.2	133.8	127.3	135.7
1952	152.3	146.7	135.6	146.7

* Weighted average, relative weights, rail freight 60 per cent, rail express 10 per cent, motor carriers 30 per cent.

Source: Indexes of Transportation Rates for Fishery Products, by Morton Garfield, Fishery Circular 23, Fish and Wildlife Service.

TRANSPORTATION OF FISHERY PRODUCTS

(Continued from page 15)

by the increase of transportation rates and charges. This is particularly true of railroad freight rates. The degree of increase in these rates has varied by types of products . . . greater for shipments of fresh and frozen fish than for canned fish. Greatest of all have been the percentage increases for shipments of fish meal and oil. The recent historical development of railroad freight rates is given in Table 2.

This development of increasing rates may also be found in motor vehicle and railway express transport, though not as great as with railroad freight rates, as in Table 3.

It appears that shippers of canned fish, including the important ones on the West Coast, have fared better than other shippers of fishery products, in this rising rate era. An immediate need to fight the increase of freight rates for canned fish has not made itself felt among shippers of those products.

However, West Coast shippers of frozen fish such as dressed halibut and salmon have noticed the great burden of these rising rates and have taken steps to protect their interests. For example, a fishery industry group in the Pacific Northwest petitioned the Interstate Commerce Commission for a hearing that freight rates on east-bound bulk shipments of frozen fish from the West Coast were excessive. Docket No. 30174 was set up and a hearing was held in Seattle, Washington. Before a decision could be rendered, the railroad companies involved agreed to lower the rates in question.

Many other cases affecting the fishing industry have been brought before regulatory bodies since the end of World War II. Besides the general freight rate cases before the Interstate Commerce Commission there have been others involving railway express shipments of fish, especially concerning icing and other service charges. Other regulatory bodies such as the Federal Maritime Board and State agencies have also considered cases affecting the fishing industry.

During the year 1953 several transportation cases came before regulatory bodies, mainly the Interstate Commerce Commission. That Agency on July 29, 1953, authorized increased freight rates and charges to be kept in effect *temporarily* until December 31, 1955, as compared with February 28, 1954, which was authorized on April 11, 1952. The railroads had asked for authorization to make the increases in question *permanent.*

Moderate increases in Railway Express Agency rates were authorized in a more recent case, Docket Ex Parte No. 185. However, considerably less increase in express rates for fishery products was finally allowed than was originally requested by the Railway Express Agency. A new contract between the railroad companies and the Railway Express Agency was considered in Docket No. 31317 and toward the end of the year 1953, the railroad's petition for increased refrigeration charges was assigned for consideration in Docket No. 31342.

There have been many notable restrictions placed on the original applications and petitions of transportation agencies to increase rates or charges as a result of hearings and proceedings before the regulatory bodies mentioned. There have been the maximum limitations or "hold downs" of canned fish rates.

A most notable result in fish transportation cases during the last ten years was the refusal of the Interstate Commerce Commission in 1950 to allow the change in billing weight practice petitioned by the Railway Express Agency in Docket I & S No. 5612. This refusal is estimated to have saved the fishing industry extra charges amounting to about $4,000,000 annually. Add to this the money value involved in other cases restricting the original intentions of transport agencies, and it becomes evident that considerable values were involved.

In this connection unreserved praise is due fishing industry trade associations which have assisted in the prosecution of the industry's interests. Many of the members have given time to the hearings and presentations in the common interest of the fishing industries. Constant vigilance by all groups of the fishery industry should continue and their cooperation in the future will be as necessary as it was in the past.

In addition to the proceedings before transportation regulatory bodies there has been action in Congress affecting the transportation of fishery products, mostly with respect to motor vehicles. When the Motor Carrier Act, 1935 was enacted broad *exemptions* from certain provisions of that Act were granted to trucks transporting fresh and frozen fish and shellfish.

Trucks carrying these products, provided such trucks do not carry for compensation any passengers and property other than exempt property, as defined in Section 203 (b) (6) of the Motor Carrier Act, 1935, are exempt from regulations of the Interstate Commerce Commission which require that permits be obtained, schedules of tariffs filed, etc., in connection with their operation. These exemptions tend to make for less rigidity in the supply of truck transportation available for the movement of fresh and frozen fish.

This "exempt" status was and is often assailed by segments of the trucking industry and by the railroads. To date the exemption still remains. However, regulations on limitations of trip leasing, which would wipe out exempt truckers revenue from backhauls obtained through leases, as issued by the Interstate Commerce Commission in its Docket No. MC 43, may tend to nullify this status to some extent. Because they sense danger in this limitation on trip leasing, segments of the fishing industry have banded together with agricultural interests urging the enactment of H.R. 3203 in the Congress.

This bill introduced by Congressman Wolverton, has already passed the House of Representatives and would prohibit the Interstate Commerce Commission from placing into effect regulations with respect to the duration of any lease for the use of any motor vehicle by a motor carrier in providing transportation, or the amount of compensation to be paid for such use. It will be the subject of considerable interest to the fishing industry since it still remains to be acted upon by the Senate during the present session of Congress.

The U. S. Department of Agriculture and the U. S. Department of the Interior, the latter through the Fish and Wildlife Service, are constantly in touch with the fishing industry on these and other matters pertaining to fishery product transportation. Alert to all developments, both Departments maintain facilities regularly available to assist the commercial fishing industry with its transportation problems. *

THE YELLOWTAIL

By E. LAURENCE PALMER

YELLOWTAIL
©1953 National Wildlife Federation

IT is not surprising that a descriptive name such as Yellowtail should be applied to more than one fish. The commonest application is to members of the genus *Lutjanus*, which genus covers broadly a group of fishes known as the Red Snappers but including also a number of other "snappers."

In the Caribbean area the name "Yellowtail" is applied to a fish which is in general red but darker above and silvery beneath but shows a number of lighter streaks. The tail of course is yellow and in young animals the iris is a bright yellow. This fish *Lutjanus vivanus* may be called the Silk Snapper or Pargo de lo Alto. It is found most commonly in the West Indies area where it feeds on the bottom and assumes a muddy taste. In spite of this it is found in the markets of the area. It reaches a weight of 40 pounds.

On our West Coast the counterpart of this Yellowtail is probably the Yellow Snapper, *Lutjanus argentiventris*, which is found from the Gulf of California south to Ecuador, being most abundant probably in the Panama area. The fore part of this fish is rose colored and the rear is yellow. A group of blue spots below the eye may form a streak of varying definition. This fish reaches a length of two feet.

Ranging from Florida south to Brazil in the Atlantic is a fish commonly called Yellowtail that is commonly under a foot in length. This is the fish we show in our illustration. It is a blue gray in general color and shows lines and spots of yellow The fins as they show in the colored stamp issued by the National Wildlife Federation in 1953 are yellow- The tail is deeply forked and the top of the head is devoid of scales. There are some yellow spots on the upper half of the body. This fish is *Ocyurus chrysurus*, and should not be confused with the California Yellowtail, *Seriola dorsalis*, which is featured as a marine game fish in so much of our literature of the out-of-doors.

The California Yellowtail ranges from Central California to Baja California and into the Gulf of California. It is rare north of Point Conception. It occurs in schools and when a sport fisherman gets into such a school with suitable bait and tackle he has a real holiday. I listened to one fisherman down in Mexico tell of such an experience last fall in a way that made my mouth water.

The California Yellowtail weighs to 80 pounds and may reach a length of nearly five feet in size. This makes Westerners scoff at Easterners when it comes to talking about Yellowtail. In 1951 this fish was the 12th in value and volume in California's commercial fisheries. This catch, taken for the most part in Mexican waters, is landed usually at San Diego or Los Angeles and most of the fish reach the cannery. The color is metallic blue to green above, silvery beneath with a brassy horizontal stripe and a yellowish green tail.

The National Wildlife Federation through articles such as this tries to help you appreciate that a common name such as Yellowtail should be recognized as being applicable to many fish and therefore should be used with caution. *

Mr. Palmer is with the National Wildlife Federation, Washington 12, D. C.

HOW TO WIN *Sales Success*

Go After the Business Where Business Is Good

★ Last year California fishermen led the nation by landing 1.3 billion pounds of fish and shellfish, valued at $81,605,112 to the fishermen.

—Report No. 393, Fish and Wildlife Service
United States Department of the Interior

The above 81½ million dollars, after processing and passing the fish through trade channels to consumers, is estimated at more than 250 million dollars total valuation . . . most of which was the tuna and tunalike fishes of Southern California ports which are covered by this magazine most completely.

★

California Produces More Than One-Third of the Annual Seafood Catch of the U.S.

★

Advertise In

This is the only commercial fishing magazine published in the State of California . . .

PAN AMERICAN *fisherman*

Established 1947

Published Monthly

"Business Magazine of the West Coast Fisheries"

ORANGE • CALIFORNIA

(Continued from page 8)

losses in fires and sinkings, is at a low point. Further, the construction of trolling boats is at an absolute minimum.

"Why? The answer is simple: No one in his right mind will risk any capital in an industry faced with ruin due to unrestricted or low-tariff imports."

--o--

WAR ON FISH POACHERS.--The Mexican Navy has declared a "war without quarter" on poaching fishermen in the Mexican waters. The renewed strife between the Mexican coast guard and American fishermen was touched off by seizure last month of the shrimper William J. jr., near Tampico.

--o--

TAX RELIEF COMING?--Congress is getting ready to push through some tax changes that are expected to provide relief for Americans generally. As we went to press it looked like the President would also make recommendations in that direction. Mounting unemployment has the Administration worried. Any changes would likely be designed to prime the pump against depression.

One thing you can look for is an increase in the exemptions of the tax payer and his dependents. Almost 100 bills are in the legislative hopper to boost the amount of money you can claim for exemptions. The most likely change now seems to be moving individual exemptions up from $600 to $700, or perhaps $800.

Odds also favor moving back the filing date for tax returns. Eisenhower recommends moving the date to April 15 from the present March 15. This has strong bi-partisan support and we look for it to become law.

Other changes may be coming along, but remember: None of the changes will take effect on the returns you file this year.

--o--

FISHERIES 1955 BUDGET CUT.--The President has recommended a budget for the Fish & Wildlife Service which would cut about $3,000 from current money available. The budget is for the year beginning July 1.

The proposed budget calls for a cut of $20,296 for work on exploratory fishing and gear development, and $53,522 from funds available for fishing technological studies. These cuts would result in curtailing of the Atlantic bluefin tuna exploration program, and New England freezing-at-sea projects. Only increase recommended is $71,132 for the Fishery Market News Service. Actually, however, this won't result in more and better service, because the extra money is designed to cover mailing costs.

--o--

SHRIMP STUDY.--Congressman Brooks of Louisiana is sponsoring legislation which would provide a half million dollars to conduct a thorough study of shrimp resources in the Gulf of Mexico. The proposal is based on recommendations by the Gulf States Marine Fisheries Commission.

FACTORY INSPECTION.--The Food & Drug Administration says that generally there has not been much change in the kind of cooperation given inspectors since new factory inspection regulations took effect 8 months ago.

Food & Drug officials report that "we always did get some refusals to allow inspections, but these generally come from plants where we'd get them regardless of the legislation."

--o--

THE 1953 CATCH.--The story of the total 1953 fish catch is the age old yarn about the fish showing or not showing up when and in the numbers expected. In the case of tuna, last year the fish generally did show up for the pack reached an all-time high of 9.5 million cases. Fish & Wildlife Service says that's about a half million cases more than the year before.

But it is different for some other fish. All in all, the total pack of canned fishery products for human consumption dropped 10 percent from 1952's 647 million pounds packed.

Production of Pacific and Jack mackerel dropped about two-thirds to 593,000 cases. Sardine pack was down a third. Canned shrimp, however, was up 10 percent.

--o--

1954 CATCH?--Fish & Wildlife Service predicts a "good market" for edible fishery products in general--but only a "steady market" for canned tuna. This forecast goes through the end of March. Indications are that tuna will experience a continued steady market well passed that month.

--o--

FISH IN COLD STORAGE.--The Department of Agriculture reports that as of January 31, cold storage holdings of fishery products totaled 170 million pounds. This compares with 189 million pounds last year, and 158 million pounds average for the past 5 years.

Frozen fishery stocks were down 23 million to 153 million pounds by the end of January. Cured fishery stocks at 17 million pounds were only 2 million pounds under last year's stocks.

Tuna stocks at the end of January totaled 427,000 pounds, compared with 161,000 pounds in December and 1.2 million the end of January a year ago.

--o--

ITALIAN MARITIME EXHIBITION.--If you are the wandering kind, you might want to take in the International Maritime Exhibition at Naples, Italy. The exhibition runs from May 15 to October 15.

The exhibition is designed to show the development of fishing as as well as shipping, and the possibilities of further progress in each industry. Interesting sections are promised in whale catching, tuna fishing, coastwise fishing, building of fishing boats, fishing equipment, cold-storage industries and fish transportation, canning and salting and fishery by-products.

Cruise Report

POFI Activities

ON joint albacore and hydrographic cruises, the *Hugh M. Smith* and *John R. Manning* departed from Honolulu on January 15, proceeding north and west of the Hawaiian Islands.

The *Smith* proceeded to carry out two legs of the hydrographic cruise, one on 165°W. longitude and the other on 160°W. longitude. Preliminary indications are that a strong transition zone from north equatorial waters to the colder more northerly North Pacific drift water causes turbulance and enrichment between about 30° and 40°N. latitude.

The *John R. Manning*, carrying out experimental fishing stations on 160° W. longitude, found a rich zone of bigeye between 30° and 34°N. latitude, and at 34°N. the *Manning* caught 42 large albacore tuna averaging 60 lbs. in weight, ranging from 45 to 75 lbs.

A report was received from Wilvan Van Campen the POFI observer on the freezership *North Star* chartered by Van Camp Sea Foods Co. to receive tuna from Japanese longline fishing vessels at American Samoa. Reports indicate that yellowfin and marlin are fairly numerous around the island but the yellowfin taken thus far have been very large ranging in size from 130 to 250 lbs. in size. A few albacore are being taken with the marlin and yellowfin. Van Camp officials were hopeful that fishing grounds could be found in the vicinity of Samoa which would yield smaller, more desirable fish for canning.

Reports reached POFI near the end of the month from Garth Murphy aboard one of the Jangaard vessels, the *North American*, indicating that they had reached the fishing grounds near Christmas Island. During the period January 29 through February 4 the *North American* fished five days, setting a total of 237 baskets, and caught eight tons of fish.

The *Alrita* fished six days, setting 290 baskets, and catching six tons of fish. Fishing during the first few days was severely hampered by numerous breaks in the line and 30 baskets of gear were lost by the *North American* because of inexperience in handling this new type of gear.

Later indications are that fishing has become better and latest reports indicate that the catch is averaging between two and four tons of yellowfin per day with the average size of the yellowfin less than 100 lbs.

The Manning Returns

The research vessel *John R. Manning* arrived back in Honolulu in February after three weeks of exploratory fishing north of Hawaii. O. E. Sette, Director of the laboratory, reported that although hampered during the last nine days of the trip by mountainous seas and high winds, the ship made an important discovery of albacore tuna which may foretell a new industry of the future for Hawaii. Albacore or long-finned tuna, known throughout the fish canning industry as the king of the tunas because of its snow-white flesh texture and high consumer demand, has never been taken in these open ocean waters before.

The large fish, ranging in size from 50 to 75 lbs., were taken in subsurface waters by the longline method of fishing. This fishing, as carried out on the *Manning*, employs about 13 miles of line with baited hooks about every 100 feet. Hung from flagged buoys this line sinks to depths of about 300 feet below the surface, where it drifts from setting time in the early morning to hauling time in the afternoon.

The vessel, fishing only experimental amount of gear, caught over one ton of albacore in one day just before heavy weather set in preventing further fishing. To add to the interest of the cruise and subsequent scientific knowledge of the habits of this deep sea tuna, D. L. McKernan and I. Ikehara, scientists aboard the *Manning*, tagged 24 of the albacore with a surgical tubing tag passed through the back. After tagging, the fish were released, still alive, into the cold waters of the North Pacific. Results of this and similar experiments, the scientists explain, will indicate how far in the broad Pacific these tuna range, whether or not these midocean tuna travel to the Asian or to the American continent or possibly to the southern hemisphere during their life span.

These studies of potential fisheries resources are being carried on simultaneously with similar studies by the Pacific coast states and a California research vessel is now exploring the region east of the area being surveyed by the *Manning* to extend our knowledge of the high seas tunas to the west coast of the United States.*

FWS Names Assistant Director

Secretary of the Interior Douglas McKay has announced the appointment of Ernest F. Swift, of Madison, Wis., as Assistant Director of the Fish and Wildlife Service.

Mr. Swift, who has been Conservation Director of the Wisconsin Conservation Department since November 1947, will take over his new post in Washington on March 15. He will be concerned primarily with the wildlife activities of the Service.

Assistant Director Arne J. Suomela, who was appointed in November 1953, will deal principally with the Service's fishery activities. He formerly was Oregon State Director of Fisheries.

Mac says . . .

When you need stationery, cards, reprints of your ad, announcements, invitations, or any kind of printing, in a hurry and reasonable . . . . . .

JOHN T. McINNIS
PRINTING & PUBLISHING
TELEPHONE ORANGE 707
127 S. OLIVE ORANGE, CALIF.

The GLOBE

An International News File Compiled from FOREIGN REPORTS

Cuba.—A United States Customs Court decision last month held that imported frozen frog legs from Cuba are properly dutiable at 8% ad valorem. This ruling was the outcome of an appeal by a New York importer who believed that frozen frog legs should be dutiable at 1½c per pound as fish (fresh or frozen, filleted, etc.).

Ecuador.—The Gulf of Guayaquil is in Ecuador and not in Peru as mentioned in a news item on page 6 of our February issue, says a letter from Manuel Crespo, Charge d'Affairs of the Ecuador Embassy in Washington, D. C.

England.—British controls over price and distribution of canned sardines, which were in effect for 12 years, have been removed. There are now ample supplies of canned sardines and sild and all other varieties of canned fish, except salmon and crab. The last named will be the only two varieties of canned fish to be imported and controlled by the Ministry of Food.

Great Britain.—The British government does not propose to alter the limits of territorial waters under its jurisdiction, announced the Minister of State in the House of Commons. The government considered the true interests of all sea-faring nations were best served by the greatest possible freedom to use the sea for all legitimate maritime activities, and viewed with concern the increasing encroachment on the high seas which had taken place in recent years in many parts of the world.

Holland.—A pilot plant for the extraction of potassium fertilizer from sea water was recently completed at Ijmuiden, near Amsterdam, Holland. Other countries may also be licensed to use the patented process. It extracts from sea water the chemical potassium nitrate, which contains two key plant nutrients—potassium and nitrogen—and is thus superior as raw material for fertilizers.

Italy.—An International Maritime Exhibition will be held in Naples, Italy, from May 15 to October 15, 1954, under the sponsorship of the Italian Ministry of Merchant Marine. The exhibition is designed to show the development of fishing as well as shipping, and the possibilities of further progress in each industry. The exhibition is organized into sections covering navigation, ship building, ocean fishing, coastwise fishing, tuna fishing, engineering and construction of fishing vessels, fishing equipment, canning, markets, and by-products. Full information may be obtained from Dr. E. Ortona, Italian Embassy, Washington, D. C.

Japan.—The Japanese fisheries agency, after discussions concerning the scale of the 1954 North Pacific mothership-type salmon fishery, based on the experience and research of the past two years, decided that the fishery will be opened to 160 vessels which meet the qualifications.

It is believed that there will be five fleets; three fleets will be composed of 40 vessels each. Ten companies were planning to try to enter their motherships in the fishery. It is anticipated that about 10 research vessels will take part in the salmon fishing, although this was not definite.

Korea.—The agent general of the United Nations Korean Reconstruction Agency (UNKRA) said in a press conference at Seoul that "an effective start" has been made toward assiting the Republic of Korea to rebuild its destroyed economy. Among the long-range projects now under way which will be completed in 1954 or later are a $1,400,000 fisheries program, and a $500,000 allocation for procuring fishing boats.

Mexico.—New seizures of three shrimp boats by Mexican authorities have been reported. The seizures, apparently of Texas boats, took place in the Tuxpan area near Tampico. Details are rather sketchy.

Norway.—The total fish catch in 1953 was about 1,300 million metric tons, a substantial drop from the 1,630 million tons landed the previous year. The setback was mainly due to the poor catch of the winter herring fisheries and the Lofoten cod fisheries. Exports of fishery products also declined from a value of about $126 million in 1952 to $101 million last year.

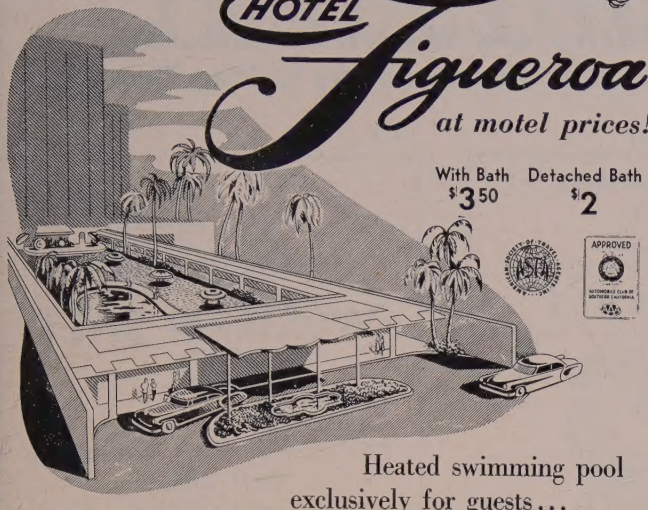
Panama.—As one of its final pre-adjournment acts, the Panamanian National Assembly ratified the instrument of adherence to the Inter-American Tropical Tuna Convention. A dispatch from Panama points out: "Now that the Assembly has acted favorably on this matter and President Remon probably will sign the act of adherence in the near future, the Government can be expected soon to designate the Panamanian members of the Tuna Commission."

Portugal.—Total Portuguese production of canned fish in oil or sauce during November 1953 is reported at 276,117 cases (10,876,637 pounds). Sardines (the leading item produced) totaled 230,987 cases (9,690,-787 pounds); anchovy 32,188 cases (686,224 pounds); tuna and tuna-like species 5,208 cases (179,896 pounds); chinchard 1,064 cases (41,844 pounds); mackerel 2,190 cases (91,069 pounds); and other species 4,480 cases (186,817 pounds).

A family hotel
in downtown
LOS ANGELES . . .

HOTEL *Figueroa*
at motel prices!

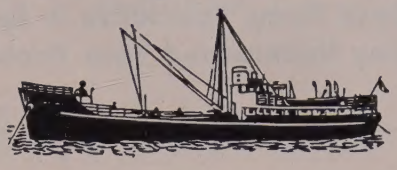
With Bath $3.50 Detached Bath $2



Heated swimming pool
exclusively for guests...
ample parking... fine food
modestly priced... only
2 blocks from Statler Center.

EARL J. WOLFORD, Manager
HOTEL FIGUEROA
Figueroa and Olympic Blvd. Los Angeles 15, California

CIA. MARITIMA,
INDUSTRIAL y MERCANTIL, S.A.



Productos de Pesca, Enlatados
Transportes Maritimos

PLANTA EMPACADORA ESTABLECIDA EN BAHIA TORTUGAS, BAJA CALIFORNIA; TRANSPORTE DE PASAJEROS Y CARGA ENTRE LOS PRINCIPALES PUERTOS DEL LITORAL DEL PACIFICO.

Contando para ello con el buque motor nacional "Ensenada II," adguirido en EE. UU. AA., con capacidad para 400 tonedalas.

Distribuidores para la Republica Mexicana, de los productos de

PESQUERA DEL PACIFICO
S. DE R. L.
ENSENADA, BAJA CALIFORNIA, MEXICO

Know Your Industry. . .

Keep abreast of the latest developments in your industry

Read Pan American Fisherman . . . *REGULARLY!*

MAIL THIS TODAY

SUBSCRIBE HERE!

Please enter my subscription for

1 year for $3

2 years for $5

(Canada and foreign, add $1 for each year extra)

NAME_____

ADDRESS_____

CITY_____ZONE_____STATE_____

☐ Bill Me ☐ Check Enclosed

Mail to PAN AMERICAN FISHERMAN, Orange Savings Bank Bldg., Orange, Calif.

DIRECTORY
Marine Sales and Services

These Firms Specialize in Serving the Fishing and Waterfront Industries. They Understand Your Problems — Save Time and Money by Calling Them

CANVAS

AMERICAN AWNING & TENT COMPANY
1105 INDIA STREET, SAN DIEGO 1, CALIF.

"Everything in Canvas"
J. E. MEYER BElmont 9-0550

LICENSES

SAVE 25%
On Mexican Bait Licences
Write or Phone to . . .
NAVIERA y COMERCIAL
SHIP BROKER
P.O. Box 119 Phone 126
ENSENADA, BAJA CALIF., MEXICO

SUPPLIES

GALVICON
COLD PROCESS GALVANIZATION FOR METALS
OIL BURNING RANGES
MARINE AND INDUSTRIAL SUPPLIES
The Carlson Co.
Phone BElmont 3-5444
1760 Kettner • San Diego 1

PAINTS

W. P. FULLER & CO.
MARINE PAINTS and GLASS
512 Front — BElmont 2-2033
803 7th — BElmont 9-4373
San Diego, California

DIESEL ENGINES

GRAYMARINE
Sales and Service
Distributed by
NUTTALL-STYRIS CO.
825-Columbia SAN DIEGO BElmont 2-5021

FUEL INJECTOR SERVICE

Sales & Service
AMERICAN BOSCH
BENDIX SCINTILLA
ADECO FUEL PRODUCTS
SEACORD'S
1254 Kettner San Diego 1
BElmont 4-1454

SEAFOOD

Henry Langhorst
Cafe
Seafood Restaurant and Cocktail Lounge
FOOT OF HAWTHORNE
Phone BElmont 2-8566
SAN DIEGO, CALIF.

FINE CLOTHES

AT YOUR SERVICE
Bill Solof
BElmont 4-5832
GRANT HOTEL
4th Ave.

Al Rodriques

San Diego, California

SALT

That Salty Salt
WESTERN SALT CO.
Plant
South End of San Diego Bay
Office
1245 National Ave.
SAN DIEGO
CALIFORNIA

SERVICES

ARTHUR DE FEVER
Naval Architect & Marine Surveyor
BOAT DESIGN SURVEY APPRAISERS
701 East Harbor Drive, P.O. Box 1049
Phone BElmont 9-2159
San Diego 12, California
San Pedro, California
Phone Terminal 27283
2100 Wilmington-San Pedro Road
P.O. Box 185

PHOTOGRAPHY

Largest and Best Equipped Studio in San Diego
BUSCO-NESTOR
PHOTOGRAPHY
COMMERCIAL • INDUSTRIAL
MARINE
SALVAGE OPERATIONS
BElmont 9-4743
2670 5th Ave. San Diego, Calif.

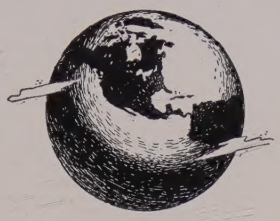
☆

Turn the Other Side
of this page and use the subscription blank there to make sure you don't miss an issue.

☆

INSURING THE PRESENT

. . . AND THE FUTURE



As In the Past So In the Future

All Activities of the American Tunaboat Association

Are Directed to Improvement and Prosperity

Of the Tuna Industry

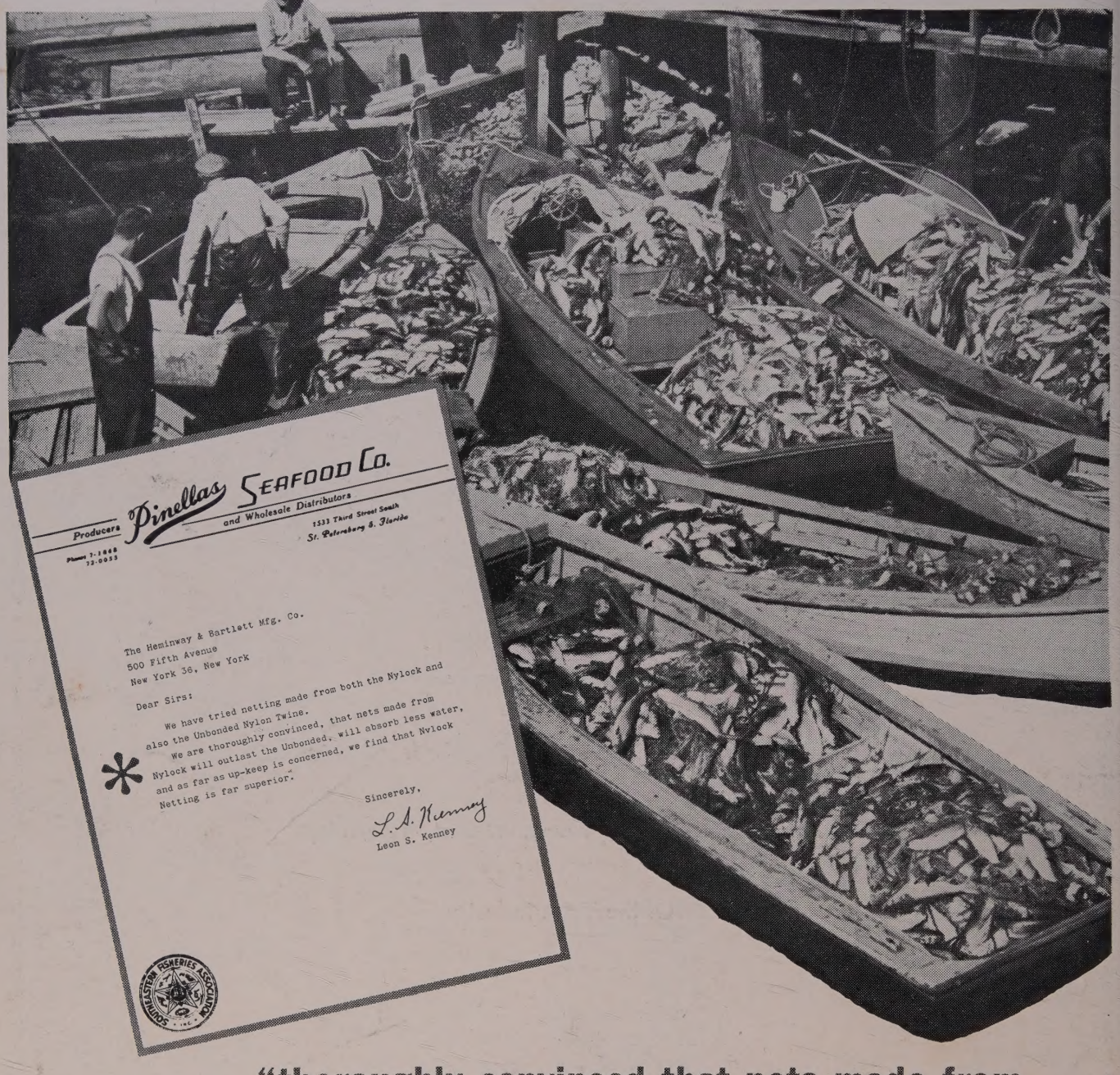
Wade Ambrose
PRESIDENT

Harold F. Cary
GENERAL MANAGER

AMERICAN TUNABOAT ASSOCIATION

No. 1 Tuna Lane • San Diego, California

PINELLAS has a good day's catch . . . thanks to nets made from NYLOCK®


Producers
Pinellas SEAFOOD Co.
and Wholesale Distributors
1533 Third Street South
St. Petersburg 6, Florida
Phone 7-1668
32-0053
The Heminway & Bartlett Mfg. Co.
500 Fifth Avenue
New York 36, New York
Dear Sirs:
We have tried netting made from both the Nylock and also the Unbonded Nylon Twine.
We are thoroughly convinced, that nets made from Nylock will outlast the Unbonded, will absorb less water, and as far as up-keep is concerned, we find that Nylock Netting is far superior.*
Sincerely,
L. S. Kenney
Leon S. Kenney
SOUTHEASTERN FISHERIES ASSOCIATION, INC.

"thoroughly convinced that nets made from NYLOCK will outlast...absorb less water...far superior"

These statements, taken from Mr. Kenney's letter shown above, are typical of the comments made by hundreds of fishermen who use nets made from NYLOCK Nylon Twine.

These same fishermen also tell us that nets made from NYLOCK catch more fish, reduce knot slippage to a minimum, require no drying — no preservatives, are easier to handle and do not fray or fuzz.

Why not convince yourself that nets made from NYLOCK will *increase your catch and lower your costs.*

For full information, write or phone one of the following manufacturers who make nets of Nylock Nylon Twine:

*ADAMS NET & TWINE DIVISION, 701 N. 2nd St., St. Louis, Mo.
*EDERER DIVISION, 540 Orleans St., Chicago, Ill.
*PAULS FISH NET DIVISION, 357 W. Ohio St., Chicago, Ill.

** Divisions of The Linen Thread Co., Inc., 418 Grand St., Paterson, N. J.*

THE FISH NET & TWINE CO., 310 Bergen Ave., Jersey City, N. J.
A. M. STARR NET CO., East Hampton, Connecticut

SPECIALLY PROCESSED
NYLOCK® TWINE
U. S. PATENT NO. 2590586

NYLOCK NYLON TWINE PRODUCED BY:

The HEMINWAY & BARTLETT Mfg. Co.

500 FIFTH AVENUE, NEW YORK 36, N. Y.

PACIFIC COAST REPRESENTATIVE: J. W. Ashley, 1940 26th Ave. North, Seattle 2, Washington